

1 CLAIMS

2 What is claimed is:

3 1. A method of generating common intermediate language code
4 comprising:

5 writing first JAVA™ language source code that comprises a definition of a
6 generic class usable in a framework;

7 generating an instance of the generic class; and

8 compiling the instance of the generic class into common intermediate
9 language code executable by a runtime engine.

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11 2. A method as recited in claim 1 further comprising storing the source
12 code in a class library of the framework.

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14 3. A method as recited in claim 1 further comprising receiving second
15 source code referencing the generic class.

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17 4. A method as recited in claim 1 further comprising:
18 receiving second source code referencing the generic class; and
19 parsing the second source code into a parse tree representing the second
20 source code.

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22 5. A method as recited in claim 1 further comprising parsing the
23 portion of JAVA™ source code into a parse tree representing the source code.

1 6. A method as recited in claim 1 wherein writing first JAVA™
2 language source code comprises defining at least one parameter associated with
3 the generic class.

4
5 7. A method as recited in claim 6 wherein the at least one parameter is
6 an unconstrained type.

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8 8. A method as recited in claim 1 further comprising declaring an
9 instance of the generic class in second JAVA™ source code.

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11 9. A method as recited in claim 8 wherein declaring an instance of the
12 generic class comprises specifying a type from a plurality of allowable types
13 associated with the generic class.

14
15 10. A method as recited in claim 9 wherein the specified type is another
16 generic class.

17
18 11. A method as recited in claim 1 wherein the generic class comprises
19 one of:

20 a Queue class;

21 a Dictionary class; and

22 a Stack class.

1 12. A method of using a generic class comprising:
2 adapting existing JAVA™ source code to include a declaration of a first
3 generic class provided by a software package having a class definition of the first
4 generic class; and
5 compiling the adapted JAVA™ source code with the class definition to
6 generate common intermediate language code.

7
8 13. A method as recited in claim 12 wherein the adapting comprises:
9 editing the existing JAVA™ source code with a Visual J# .NET™
10 application in a .NET™ Framework.

11
12 14. A method as recited in claim 12 wherein the class definition defines
13 at least one parameter of the generic class.

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15 15. A method as recited in claim 12 wherein compiling comprises:
16 validating a specified type of the generic class according to the class
17 definition.

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19 16. A method as recited in claim 12 wherein the adapting comprises
20 nesting a second generic class in the declaration of the first generic class.
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1 17. A system for authoring source code comprising:
2 a class library having a generic class definition; and
3 a means for receiving a declaration of an instance of the generic class in
4 JAVA™ language source code.

5
6 18. A system as recited in claim 17 wherein the means for receiving
7 comprises a computer-readable medium having stored thereon a VISUAL J#
8 .NET™ application.

9
10 19. A system as recited in claim 17 further comprising a common
11 intermediate language importer operable to associate the generic class declaration
12 in the JAVA™ language source code to the generic class definition.

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14 20. A system as recited in claim 17 further comprising a semantic
15 analyzer operable to validate the generic class declaration in the JAVA™ language
16 source code according to the generic class definition.

17
18 21. A system as recited in claim 17 further comprising a code generator
19 operable to generate metadata descriptive of the generic class and further operable
20 to generate common intermediate language code representative of the generic
21 class.

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23 22. A system as recited in claim 21 further comprising a runtime engine
24 operable to translate the common intermediate language into machine-specific
25 binary executable by a computer associated with the runtime engine.

1 23. A computer-readable medium having stored thereon microprocessor-
2 executable instructions for performing a method comprising:

3 receiving input representing a generic class definition in a JAVA™
4 language;

5 receiving source code that references the generic class; and

6 compiling the source code with an instance of the generic class into
7 common intermediate language code executable by a runtime engine.

8
9 24. A computer-readable medium as recited in claim 23 wherein the
10 method further comprises storing the generic class definition in a framework class
11 library.

12
13 25. A computer-readable medium as recited in claim 23 wherein the
14 source code comprises JAVA™ language source code.

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16 26. A computer-readable medium as recited in claim 23 wherein the
17 method further comprises generating metadata describing the generic class.

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19 27. A computer-readable medium as recited in claim 23 wherein the
20 generic class definition comprises a generic class name and two angular brackets
21 around one or more parametric types.

22
23 28. A computer-readable medium as recited in claim 23 wherein the
24 method further comprises compiling the generic class definition into common
25 intermediate language code.